| | Application No. | Applicant(s) |
|---|---|---|
| **_Notice of Allowability_** | 10/665,226 | EHRLICH, RICHARD M. |
| | Examiner | Art Unit | |
| | Natalia Figueroa | 2651 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *reply (filed 08/12/2005)*.

2. ☒ The allowed claim(s) is/are *1-8,10-18 and 20-30*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All     b) ☐ Some*     c) ☐ None     of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

## REASONS FOR ALLOWANCE

### *Allowable Subject Matter*

1.      Claims 1-8, 10-18, and 20-30 are allowed.

2.      The following is an examiner's statement of reasons for allowance:

RE claim 1, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to teach

or suggest a method comprising (b) filtering the amplitude error signal to produce an automatic

gain control (AGC) signal useful as feedback to the variable gain amplifier (VGA) of the read

channel; and (c) limiting the AGC signal to keep it within a desired range, before providing the

AGC signal as an input to the VGA) wherein the desired range includes at least one of an upper

limit and a lower limit.

RE claim 6, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to teach

or suggest a method comprising (b) filtering the amplitude error signal to produce an automatic

gain control (AGC) signal useful as feedback to the variable gain amplifier (VGA) of the read

channel; and (c) limiting the AGC signal to keep it within a desired range, before providing the

AGC signal as an input to the VGA; wherein step (b) includes (b.1) filtering the amplitude error

signal using a digital filter including an integration path; and (b.2) limiting the integration path

within the digital filter to thereby prevent integral windup.

RE claim 8, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to teach

or suggest a method comprising (c) limiting the AGC signal to keep it within a desired range,

before providing the AGC signal as an input to the VGA; wherein step (c) includes (c.1)

comparing each servo automatic gain control (AGC) value, of the servo AGC signal, to an upper

limit and a lower limit; (c.2) if the servo AGC value is above the upper limit, limiting the servo

AGC value to the upper limit; and (c.3) if the servo AGC value is below the lower limit, limiting the servo AGC value to the lower limit.

RE claim 10, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to teach or suggest a method comprising (a) comparing a servo automatic gain control (AGC) value to an upper limit and a lower limit; (b) if the servo AGC value is above the upper limit, limiting the servo AGC value to the upper limit; and (c) if the servo AGC value is below the lower limit, limiting the servo AGC value to the lower limit.

RE claim 11, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to teach or suggest a method comprising (b) filtering the phase error signal to produce a servo phase lock loop (PLL) signal useful as feedback to an oscillator; and (c) limiting the PLL signal to keep it within a desired range, before providing the PLL signal as an input to the oscillator; wherein the desired range includes at least one of an upper limit and a lower limit.

RE claim 16, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to teach or suggest a method comprising (b) filtering the phase error signal to produce a servo phase lock loop (PLL) signal useful as feedback to an oscillator; and (c) limiting the PLL signal to keep it within a desired range, before providing the PLL signal as an input to the oscillator; wherein step (b) includes (b.1) filtering the PLL signal using a digital filter including an integration path; and (b.2) limiting the integration path within the digital filter to thereby prevent integral windup.

RE claim 18, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to teach or suggest a method comprising (c) limiting the PLL signal to keep it within a desired range, before providing the PLL signal as an input to the oscillator; wherein step (c) includes (c.1) comparing each servo PLL value, of the servo PLL signal, to an upper limit and a lower

limit; (c.2) if the servo PLL value is above the upper limit, limiting the servo PLL value to the

upper limit; and (c.3) if the servo PLL value is below the lower limit, limiting the servo PLL

value to the lower limit.

RE claim 20, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to

teach or suggest a method comprising (a) comparing a servo phase lock loop (PLL) value to an

upper limit and a lower limit; (b) if the servo PLL value is above the upper limit, limiting the

servo PLL value to the upper limit; and (c) if the servo PLL value is below the lower limit,

limiting the servo PLL value to the lower limit.

RE claim 21, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to

teach or suggest a method comprising (c) storing the servo AGC value in a register; (d) if the

servo AGC value stored in the register is outside a desired range, replacing the servo AGC value

stored in the register with a value that is within the desired range; and (e) using the servo AGC

value stored in the register as, or to predict, a starting AGC value when beginning to read a next

servo wedge.

RE claim 26, the prior art of record, and in particular Bliss (USPN 5,585,975) fails to

teach or suggest a method comprising (c) storing the servo PLL value in a register; (d) if the

servo PLL value stored in the register is outside a desired range, replacing the servo PLL value

stored in the register with a value that is within the desired range; and (e) using the servo PLL

value stored in the register as, or to predict, a starting servo PLL value when beginning to read a

next servo wedge.

3.     Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

*Conclusion*

4.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Natalia Figueroa whose telephone number is (571) 272-7554.

The examiner can normally be reached on Monday - Thursday 8:00-5:00.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NFM

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